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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/741,532 | 12/19/2000 | Venkatesan Murali | 42390P10305 | 6371 |

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EXAMINER

CHEN, KIN CHAN


ART UNIT

PAPER NUMBER

1765

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|---|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/741,532 | MURALI, VENKATESAN | |
| | Examiner | Art Unit |  |
| | Kin-Chan Chen | 1765 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on February 23, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 16 and 26-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 16 and 26-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 2, 3, and 28-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. For example, the specification does not disclose forming a lens **on the top of fiber optic** and depositing a **polymer on top of fiber optic**. Rather, the specification teaches said forming and depositing on top of optical core material.

2. Claims 31 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 31 recites the limitation "the hole extends" in line 2. There is insufficient antecedent basis for this limitation in the claim because there is no processing step for forming a hole in the cladding layer.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 16, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupperman et al. (US 5,169,188; hereinafter "Kupperman") in view of Kenney et al (US 6,311,004; hereinafter "Kenney").

Kupperman teaches that a hole may be made in a substrate. The hole extends from one side of the substrate through the substrate to an opposite side of the substrate. The substrate may be heated to expand the hole. A ceramic cable may be inserted into the hole. The substrate may be cooled to contract the hole to hold the ceramic cable in place (abstract; col.2, line 65 to col. 3, line3). Kupperman teaches using a ceramic cable for insertion therefore, it includes fiber optic.

Kupperman does not teach the method comprising polishing the substrate. However, it is a conventional process step in the art to planarize the surface. Kenny is relied on only to show this conventional process step. Kenny teaches that the planarization (so-called polishing in the instant claims) may be used in the process, see col. 9, line 62. Hence, it would have been obvious to one with ordinary skill in the art to modify Kupperman by using this conventional process step as taught by Kenny in order to provide their art recognized advantages and produce an expected result.

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As to dependent claims 2-3, Kupperman does not teach that a lens may be formed on top of the fiber optic material. However, it is a well-known feature in the art of optical system and is a choice of design depending on the product requirement. Kenny is relied on only to show this well-known feature. Kenny teaches that the silica cladding material and polymer may be placed between lenses (col. 17, lines 8-10). Hence, it would have been obvious to one with ordinary skill in the art to modify Kupperman by adding the lens on the optical core material (such as polymer) as taught by Kenny in order to provide their art recognized advantages and meet the specific product requirement.

The above-cited claims differ from the prior art by specifying well-known features (such as making a hole by etching) to the art of electro-optics fabrication and using various processing parameters (such as heating temperature). However, they are commonly determined by routine experiment. The process of conducting routine optimizations so as to produce an expected result is obvious to one of ordinary skill in the art.). In the absence of showing criticality or new, unexpected results, a person having ordinary skill in the art would have found it obvious to modify the combined prior art by performing routine experiments to obtain optimal result and adding any of same well-known features to same in order to provide their art recognized advantages and produce an expected result. It is noted that applicant did not traverse the aforementioned conventionality (e.g., well-known features, obviousness), which have been stated in the previous office action (April 1, 2003).

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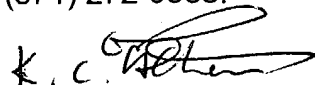
Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kin-Chan Chen whose telephone number is (571) 272-1461. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-0988.

March 26, 2004


KIN-CHAN CHEN
PRIMARY EXAMINER